*1 Multiple "types" of memory (e.g., declarative, working, etc.) have been proposed. To what extent does the neurophysiological evidence support or contradict the idea of distinct memory systems as opposed to a more 'unified' memory system that is flexible enough to operate differently depending on the task.*

*2 Many of your papers use computational models to understand and interpret learning in humans. Please describe (a) How have these models been used to study learning; (b) What are their main advantages over purely behavioral research? (c) what are some of their disadvantages? Then describe the factors one might need to consider when creating or evaluating a model of complex skill learning.*

*3 What do we already know about the cognitive basis(es) of learning computer programming languages? Based on your other readings on learning and memory more generally, what might be missing from our current knowledge?*

4 Some of your readings cover the development of expertise (or skill) from a cognitive perspective (mind rather than brain)

• According to these readings, what are differences between experts and novices (those who are highly skilled and those in the initial stages of learning)?

• What changes as a person becomes more skilled or expert in a particular domain?

• Are there differences/disputes/disagreements with respect to what is taking place in the development of expertise (or skill) among the views represented in your readings? If so, explain them and offer your own opinion on the topic.

• Finally, what are the implications of this issue for our understanding of human cognition in general?

*5 Computational models play an important role in cognitive science and in your reading list. It is likely, however, that complex skills, such as computer programming, would also require complex models, and complex models often contain many additional assumptions and parameters, making it easier to explain any type of data. Based on your reading list, how would you make sure that a possible model of computer programming is a realistic account of how humans learn?*